REMARKS

In the Office Action mailed on April 18, 2002, claims 87-91 and 95-114 were pending. Claims 87-91, 95, 98-102, 106-110, and 112-114 were rejected under 35 U.S.C. 102(b) as being anticipated by Kanji et al. (U.S. Patent No. 5,067,007, hereafter Kanji). Claims 96-97, 103-105, and 111 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kanji.

In this preliminary amendment, no claims have been cancelled. Thus, all claims 87-91 and 95-114 remain pending. Claims 87, 95-98, 101-103, 106-110, and 112-113 have been amended. In addition, new claims 154-165 have been added. Applicant submits that the newly added claims are supported by the original specification, and thus, no new matter has been added. Applicant respectfully requests consideration of the instant application as amended.

Claim Rejections – 35 U.S.C. 102(b)

Claims 87-91, 95, 98-102, 106-110, and 112-114 were rejected under 35 U.S.C. 102(b) as being anticipated by Kanji.

> "To anticipate a claim, the reference must teach every element of the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (Manual of Patent Examining Procedures (MPEP) 2131.)

Applicant respectfully submits that independent claim 87 includes the limitations that are not disclosed or claimed by Kanji. In particular, claim 87 has been amended to include the limitation of "a contact tip structure structurally distinct from said resilient elongate element, an end of said resilient elongate element bonded to said contact tip structure". Kanji fails to teach or disclose the limitation of "a contact tip structure structurally distinct from said

resilient elongate element, an end of said resilient elongate element bonded to said contact tip structure". Rather, Kanji discloses a lead pin having a tip and a body and wherein the tip and the body are integrally formed from one continuous piece of material. Thus, the tip and the body of Kanji are not distinct structures, nor is there any reason to include a bond to hold the tip and the body together, see, for example, Figs. 1C-1D, 3C, and 7C. Therefore, independent claim 87 is not anticipated by Kanji.

Similarly, independent claim 106 has been amended to include the limitation of "a contact tip structure structurally distinct from said resilient elongate element, a second end of said resilient elongate element bonded to said contact tip structure", thus for the reasons similar to those discussed above, independent claim 106 is not anticipated by Kanji. Dependent claims 88-91, 95-105, 107-114, and 154-165 depend from one of the independent claims 87 and 106, thus include all of the distinct limitations of the their respective independent claims, and therefore are not anticipated by Kanji. Withdrawal of the rejections is respectfully requested.

Claim Rejections – 35 U.S.C. 103(a)

Claims 96-97, 103-105, and 111 were rejected under 35 U.S.C. 102(b) as being unpatentable over Kanji.

> "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art". *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). (MPEP ¶ 2143.03).

Claims 96-97, 103-105, and 111 of the present application include limitations not disclosed or taught by Kanji. As a result, claims 96-97, 103-105, and 111 are patentable over Kanji.

Specifically, as discussed above, independent claims 87 and 106 include the limitation of "a contact tip structure structurally distinct from said resilient elongate element, an end of said resilient elongate element bonded to said contact tip structure". Kanji fails to teach, disclose, or suggest the limitation of "a contact tip structure structurally distinct from said resilient elongate element, an end of said resilient elongate element bonded to said contact tip structure". Claims 96-97, 103-105, and 111 depend from one of the independent claims 87 and 106, thus include the distinct limitations of the independent claims 87 and 106, and therefore, for the reasons similar to those discussed above, are patentable over Kanji. Withdrawal of the rejection is respectfully requested.

Inventor Disclosure Statements (IDS)

Applicant's records show that two IDS have been previously filed on August 11, 2000 and on September 14, 2001 respectively. Applicant has not received copies of the Information Disclosure Citation Form PTO-1449 initialed by the Examiner indicating such cited references being considered. Attached please find copies of the corresponding IDS filings. Applicant respectfully requests the Examiner to return copies of the Information Disclosure Citation Form PTO-1449 initialed by the Examiner to indicate such consideration.

CONCLUSION

In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would expedite or assist in the allowance of the

present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,

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Date: 7/17, 2002

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend claims 87, 95-98, 101-103, 106-110, and 112-113 as indicated below.

87. (Four Times Amended) An electrical interconnection component comprising:

a [freestanding] resilient elongate element; and

a contact tip structure [created in a first substrate and then secured only to an end of the freestanding resilient elongate element and released from said first substrate wherein the contact tip structure is non-releasably secured only to said end of the freestanding resilient elongate element when the freestanding resilient elongate element is conducting current as an electrical interconnection] structurally distinct from said resilient elongate element, an end of said resilient elongate element being bonded to said contact tip structure.

88. (Amended) The interconnection component, according to claim 87 wherein:
the contact tip structure is formed with at least one pointed feature.

89. The interconnection component, according to claim 87 wherein:
the contact tip structure comprises multiple metallic layers.

90. (Amended) The interconnection component, according to claim 87 wherein:
the contact tip structure is integral with a cantilevered interconnect structure.

91. (Amended) The interconnection component, according to claim 87 wherein:
the interconnection element has a core element and a shell on the core element.

95. (Twice Amended) The interconnection component, according to claim 87 wherein:

said [freestanding] resilient elongate element comprises a core element, and wherein the core element has a diameter in the rage of from 0.25 to 10 mils.

96. (Twice Amended) The interconnection component, according to claim 87 wherein: said [freestanding] resilient elongate element comprises a core element, and wherein the core element has a diameter in the range of from 0.5 to 3 mils.

97. (Twice Amended) The interconnection component, according to claim 87 wherein: said [freestanding] resilient elongate element comprises a core element, and wherein the core element has a length in the range of from 10 mils to 500 mils.

98. (Twice Amended) The interconnection component, according to claim 87 wherein: said [freestanding] resilient elongate element comprises a shell, and wherein the shell has at least one layer which comprises a material which is selected for its ability to provide mechanical properties selected from the group consisting of spring properties, resiliency yield strength and compliance for the resilient elongate element.

99. The interconnection component, according to claim 98 wherein:
the shell has at least one layer which comprises a material which has a yield strength of at least thirty thousand pounds per square inch.

100. The interconnection component, according to claim 98 wherein:
the shell has at least one layer which comprises a material which has a tensile strength in excess of 80,000 pounds per square inch.

101. (Twice Amended) The interconnection component, according to claim 87 wherein:

said [freestanding] resilient elongate element comprises a shell, and wherein the shell has at least one layer which comprises a material selected from the group consisting of nickel, iron, and cobalt.

102. (Twice Amended) The interconnection component according to claim 87 wherein:
said [freestanding] resilient elongate element comprises a shell, and wherein the shell has at least one layer which comprises a material selected from the group consisting of copper, nickel, cobalt, tin, boron, phosphorous, chromium, tungsten, molybdenum, bismuth, indium, cesium, antimony, gild, silver, rhodium, palladium, platinum, lead, and ruthenium.

103. (Twice Amended) The interconnection component, according to claim 87 wherein:
said [freestanding] resilient elongate element comprises a core element and a shell, and wherein the core element comprises gold and the shell comprises a material selected from the group consisting of nickel and cobalt.

104 The interconnection component, according to claim 91 wherein:
the shell has a thickness in the rage of from 0.20 mils to 20 mils.

105. The interconnection component, according to claim 91 wherein:
the shell has a thickness in the range of from 0.25 to 10 mils.

106. (Four Times Amended) An electronics assembly comprising:
a substrate;
a [freestanding] resilient elongate element having a first end secured to the substrate; and

a contact tip structure [created in another substrate and then secured only to a second end of the freestanding resilient elongate element opposing the first end and released from said another substrate wherein the contact tip structure is non-releasably secured only to the second end of the freestanding resilient elongate element when the freestanding resilient elongate element is conducting current as an electrical interconnection], structurally distinct from said resilient elongate element, an end of said resilient elongate element being bonded to said contact tip structure.

107. (Twice Amended) The electronics assembly, according to claim 106 further comprising:

a plurality of [freestanding] resilient elongate elements, each having a first end secured to the substrate; and a plurality of contact tip structures, each secured to a respective end of the respective [freestanding] resilient elongate element opposing a respective first end thereof.

108. (Twice Amended) The electronics assembly, according to claim 106 wherein:

the contact tip structure is separately fabricated and mounted to the [freestanding] resilient elongate element.

109. (Twice Amended) The electronic assembly, according to claim 108 wherein:

the [freestanding] resilient elongate element has a relatively flexible core element and a layer on the relatively flexible core element.

110. (Twice Amended) The electronic assembly, according to claim 108 wherein:

the [freestanding] resilient elongate element has a relatively flexible core and a layer, on the relatively flexible core element, of a material selected from the group

consisting of nickel, an alloy of nickel, cobalt, an alloy of cobalt and an alloy of nickel and cobalt.

111. The electronic assembly according to claim 110 wherein:
the relatively flexible core element comprises gold.

112. (Twice Amended) The electronics assembly, according to claim 106 wherein:
the [freestanding] resilient elongate element has a core element and a shell [;] , and wherein the core element is readily-shaped and comprises a material selected [form] from the group consisting of:
(a) gold, aluminum and copper with small amounts of beryllium, cadmium, silicon and magnesium, and
(b) metals of the platinum group, and
(c) lead, tin, and indium.

113. (Twice Amended) The electronics assembly, according to claim 109 wherein:
the layer comprises a material which is selected for its ability to provide mechanical properties selected from the group consisting of spring properties, resiliency yield strength and compliance for the [freestanding] resilient elongate element.

114. The electronics assembly, according to claim 109 wherein:
the first end of the relatively flexible core element forms a first intimate bond with a conductive contact terminal carried by an electronic component; and
the layer forms a second intimate bond with at least a portion of the conductive contact terminal immediately adjacent the first intimate bond.